



Figure 1.

Life expectancy for the United States, 1900-1981, contrasted with the proportion of the Gross National Product expended for health care. Roman numerals (I, II, III) represent major cycles of biomedical progress (see Fig. 2).

mortality is, of course, not the only indicator. E.G. there has been enormous progress in treatment of psychiatric conditions, with great human benefit not measured by life expectancy.

Part of my argument, and part of our mutual concern, is epitomized in a chart familiar to many of you: the improvement of life expectancy since 1900 (Fig. 1). It also shows the percentage of the Gross National Product which has been devoted to health expenditure since 1930, when the collection of those statistics began. The striking thing you can see from this chart is that there seemed to be no correlation between the very sharp increase in expenditures for health that this country has experienced since the middle fifties and the near flattening of our mortality rate until the last decade.

Let me stress that throughout this period expenditures for health research have fluctuated between a little over one percent and perhaps as much as four percent of the total health expenditure at various periods. In fact, there is no

But we should understand the relationship better.

Personal Memo from  
JOSU W. LEDERBERG

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JUL 23 1986

The issues.

I very much appreciated the opportunity to meet you.

The issues list attached has no surprises. It is not too far from OSTP's preoccupations in the past.

I heard Say (HHS) Brown the other evening. He said a little bit about HCFA studying health outcomes. But it boiled down to standards of quality of care inputs.

If you have time I wouldn't mind at all hearing from you in Palo Alto next month.

Good luck,

John Lederberg

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thoughts on agenda for graham. No surprises

#### Rationalization of world economy.

- US competitive advantages
  - hi tech
  - information infrastructure
  - ... ?
  - agriculture
  - other resources
  - Educational systems
  - international trade; export controls
- US competitive disadv.

#### National Security

- US-USSR
  - weapons
  - arms control
  - intelligence, interface to policy
  - scientific and technical relations; vs human rights
  - (export control issues)

- terrorism; safe travel
- CBW

#### US as fount of technology for world development

- essentiality for avoidance of major conflict
- world health
- world population
- world agriculture
- US economic and technical interactions with all of
- above; and with division of labor

#### Environmental tradeoffs

- asbestos
- toxic waste disposal
  - protect water supply; standards?
  - oceans; incineration?
- radioactive
- CW
- energy
  - CO2
  - nuclear power

#### Health

- aging population
- AIDS; vaccines
- rationalize health expend. / outcomes
  - not only mortality; e.g. psychiatric
- drug abuse

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of.  
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